

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SMC 60583/WO		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/GB 03/05521	International filing date (day/month/year) 18.12.2003	Priority date (day/month/year) 20.12.2002	
International Patent Classification (IPC) or both national classification and IPC H01L51/30			
Applicant AVECIA LIMITED et al.			
<p>1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand 01.06.2004		Date of completion of this report 17.05.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Frias Rebelo, A Telephone No. +49 89 2399-7451 	

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I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-20 as originally filed

Claims, Numbers

1-30 as originally filed

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	22,27
	No: Claims	1-21,23-26,28-30
Inventive step (IS)	Yes: Claims	
	No: Claims	22, 27
Industrial applicability (IA)	Yes: Claims	1-30
	No: Claims	

2. Citations and explanations

see separate sheet

CONCERNING SECTION V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents cited in the International Search Report. The numbering will be adhered to in the rest of the procedure:

D1: WO 99/54385 A (DOW CHEMICAL CO) 28 October 1999 (1999-10-28)
D2: WO 02/45184 A (BROWN BEVERLEY ANNE ;LEEMING STEPHEN WILLIAM (GB); YEATES STEPHEN) 6 June 2002 (2002-06-06)
2. The composition of independent claim 1 is not new and therefore does not meet the requirements of Article 33(2) PCT. The reasons are as follows:
 - 2.1 D1 discloses a composition for use in e.g. light-emitting diodes, i.e. as an organic semiconducting material (see page 1, line 1 to 7), the composition comprising e.g.:
 - at least one higher molecular weight organic semiconducting compound, e.g. copolymers comprising e.g. fluorene groups, and having a number average molecular weight (M_n) of at least 5000 (see e.g. page 1 line 7 to page 2, line 5; page 4, lines 1 to 8)
 - at least one lower molecular weight organic semiconducting compound, which can contain e.g. thiophene groups, and having a number average molecular weight (M_n) of at least 1000 or less (see e.g. page 7, line 22 to page 9, formulas (1)-(8))

Therefore, no difference can be found between the claimed composition and the one disclosed in D1.
3. Dependent claims 2-22 do not contain any features which, in combination with features of independent claim 1 to which they refer, meet the requirements of the PCT in respect to novelty or inventive step (Article 33 (2) and (3) PCT). The features recited in these claims refer to variations of electrical properties of the components or to compositional changes or of the composition of claim 1 which are either known

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from D1 or come within the scope of the customary practice followed by persons skilled in the art when optimising the properties of the composition for use as semiconducting material - see further D1 and D2 and the corresponding passages cited in the search report.

4. Claims 23-30 are not new and therefore do not meet the requirements of Article 33(2) PCT, because the use of the composition as e.g. in claim 1 for electronic devices (as recited in claims 23 and 30) or layers comprising compositions according to e.g. claim 1 with the features recited in claims 24-26 and 28-39 are either known from D1 or come within the scope of the customary practice followed by persons skilled in the art when optimising such devices or layers - see further D1 and D2 and the corresponding passages cited in the search report.